ADMINISTRAŢIA PUBLICĂ ŞI DEZVOLTAREA REGIONALĂ A ENERGIEI REGENERABILE

PUBLIC ADMINISTRATION AND REGIONAL DEVELOPMENT OF RENEWABLE ENERGY

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Abstract
This study investigates the public policy in the field of renewable energy and explores how can practically be involved the local public administration in renewable energy projects' implementation. Hence, the public policy in the field of renewable energy is disclosed, and the partnership public administration – private companies for regional development of renewable energy is explored, revealing the role of municipalities in renewable energy projects, the community resistance to implementation of renewable energy projects, and some local measures for developing renewable energy projects. The results of this study may be used for future research in the area of implementing renewable energy projects at regional level through partnerships between the public administration and private companies.

Keywords: public administration, renewable energy, regional development, public-private partnership.

JEL CODES: Q42, R11, L32, M10.

Rezumat
Studiul investighează politica în domeniul energiei regenerabile şi maniera în care administraţia publică locală poate fi implicată în implementarea proiectelor de producere a energiei regenerabile. Tocmai de aceea, în cadrul studiului sunt reliefate politica în domeniul energiei regenerabile, precum şi parteneriatul administraţie publică – societăţi private pentru dezvoltarea regională a energiei regenerabile. Astfel, se evidenţiază rolul administraţiei publice locale în proiectele din domeniul energiei regenerabile, rezistenţa comunităţii locale atunci când se doreşte implementarea unor astfel de proiecte, precum şi unele măsuri locale pentru dezvoltarea proiectelor din domeniul energiei regenerabile. Rezultatele acestui studiu ar putea fi utilizate pentru cercetări viitoare în zona implementării proiectelor din domeniul energiei regenerabile la nivel regional prin parteneriate între administraţia publică şi companii private.

Cuvinte cheie: administraţie publică, energie regenerabilă, dezvoltare regională, parteneriat public-privat.

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1. INTRODUCTION

Renewable energy sources can make a major contribution to regional economic development. Thus it is reasonable to involve the local public administration in renewable energy projects' implementation. Therefore, the aim of this study is to reveal the public policy in the field of renewable energy and to explore how can practically be involved the local public administration in renewable energy projects' implementation. Firstly, the public policy in the field of renewable energy is disclosed, and secondly, the public administration – private companies partnership for regional development of renewable energy is explored, with an eye to reveal the role of municipalities in renewable energy projects, the community resistance to implementation of renewable energy projects, and the local measures for developing renewable energy projects.

The research was carried out using a large variety of sources, such as research reports and articles, as well as books. The research question was answered by analyzing published sources, and by evaluating and interpreting evidence.

2. PUBLIC POLICY IN THE FIELD OF RENEWABLE ENERGY

Electricity is today at the heart of the European Union's well-being, playing a very important role in our daily life. It offers the motive power of the economic activity and has much influence on the quality of living environment (Wang et al., 2006). According to Leva and Zaninelli (2006), the world energy scenario was deeply changed in the last few years and the attention has been moved on the environmental effects of the energy generation trying to establish a connection between energy, development and sustainability (figure 1).

The humankind can develop only on the principles of sustainability and nature protection, meaning that system meets the needs of the present without compromising the ability of future generations to meet their own needs (Pozeb and Krope, 2007). The availability of energy, the cost and the impact of energy choices on the environment, are factors that influence the community development (Leva and Zaninelli, 2006). With increasing environmental concern, the impact of conventional electricity generation on the environment is being minimized and efforts are made to generate electricity from renewable sources (Wang et al., 2006).

In the complex picture of energy policy, renewable energy sector is the one energy sector which stands out in terms of ability to reduce greenhouse gas emissions and pollution, exploit local and decentralised energy sources, and stimulate world-class high-tech industries. There are at least four reasons for

developing renewable energies: first, society relies mainly on fossil fuels, which are limited and non-renewable; second, fossil fuels will be exhausted in a foreseeable future; third, the use of fossil fuels has generated environmental effects that negatively affect social well-being beyond acceptable limits; and fourth, renewable energy sources could satisfy the needs of modern society in terms of consumption and environmental impact.

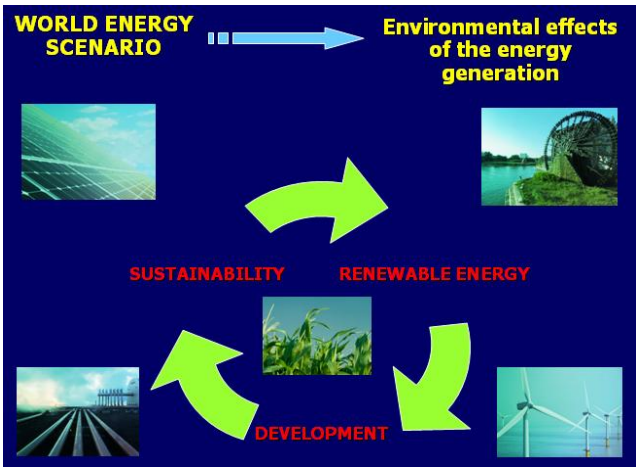

FIGURE 1 CONNECTING RENEWABLE ENERGY, DEVELOPMENT AND SUSTAINABILITY

Nowadays it is more or less acknowledged that renewable energy sources have a large potential to contribute to the sustainable development of specific territories by providing them with a wide variety of socioeconomic benefits (figure 2), including diversification of energy supply, enhanced regional and rural development opportunities, creation of a domestic industry and employment opportunities (Del Río and Burguillo, 2009: 1315). The integration of renewable energy projects into regional development process may create external positive effects concerning increased energy security and other regional development goals, such as the reduction of unemployment and the decrease of environmental impact (Klevas et al., 2009: 155). Although the distinctive potentials and contributions of renewable and efficient energy to sustainable and regional development have been recognized, its widespread implementation was delayed (Ingwe et al., 2009).

The European Union's 20-20-20 policy for 2020 has established 20-20-20 targets, meaning that the greenhouse gas emissions should be reduced by at least 20% by 2020 (compared with 1990 levels), the energy efficiency should be improved by 20% by 2020, and the share of renewable energy in energy mix should be raised to 20% by 2020.

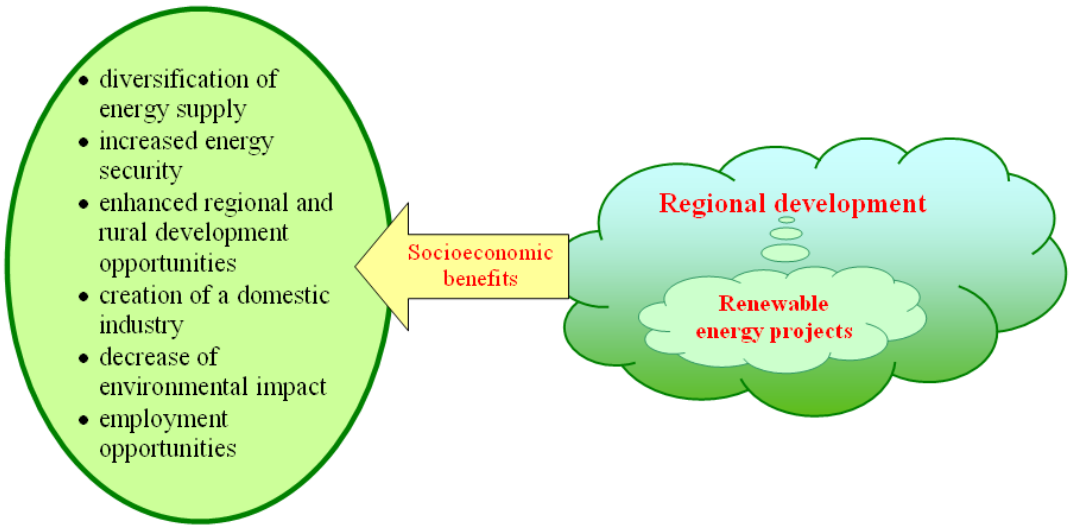

FIGURE 2 - SOCIOECONOMIC BENEFITS OF RENEWABLE ENERGY PROJECTS' INTEGRATION INTO REGIONAL DEVELOPMENT PROCESS

The ambitious European 2020 targets on energy and climate, and more particular for renewable energy, request an important mobilization of investments in the coming decade (ECOFYS, 2011: 143). Significant investments will be required (3% of cumulative GDP between 2010 and 2030) and the public sector alone won't be able to provide this level of investments (The World Bank, 2010), which means that there is a need to create a climate that is attractive for private investments and/or for public-private partnerships in this sector.

The development of renewable energy sources is increasingly planned at a regional and local level where needs and opportunities can more easily be taken into account, due to the decentralisation of energy supply which enables local and regional factors to play a more important role (Applica & Ismeri Europa, 2011: 10).

The renewable energy sources available at regional level can make a major contribution to regional economic development. Furthermore, important progress in energy efficiency can be made at regional and local level. In addition, the investment in energy efficiency can often give a major boost to local industries (for instance, the restoration of buildings). While regional energy strategies are implemented in the context of European integration, the role of regions as economic players is also becoming increasingly important and therefore, regions must work to create an overall framework which is conducive to action (Frant and Minica, 2008: 2).

Policies to support renewable energy and energy efficiency need to be adapted to the features of different regions, the circumstances prevailing there and the potential for the development of new energy sources (Applica & Ismeri Europa, 2011: 10).

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Bucharest, June 21-22, 2011

3. PUBLIC ADMINISTRATION – PRIVATE COMPANIES PARTNERSHIP FOR REGIONAL DEVELOPMENT OF RENEWABLE ENERGY

There are many challenges for both local governments and developers (investors) in the field of renewable energy and its regional development. On one hand, the policy challenge for local governments is to further stimulate and enable the development of renewable energy projects in their regions, in agreement with the national agenda, without compromising local social cohesion. On the other hand, the main challenge for developers is to tackle social resistance without diminishing the profitability and/or the legitimacy of their projects (Rebelgroup, 2011: 4). There is a strong need for a renewable energy partnership between public authorities, business community and civil society in order to achieve the regional development of renewable energy (figure 3).

FIGURE 3 - RENEWABLE ENERGY PARTNERSHIP

Improving the living standard of the regions with a weak economy and reducing their depopulation can be better achieved by implementing integrated regional policies aimed at reducing interregional disparities (Del Río and Burguillo, 2009: 1325). However, these policies have to be supported by actions at local and regional level, and the local authorities have to be involved in renewable energy projects' implementation.

3.1. Role of municipalities in renewable energy projects

The investments in renewable energy projects may play a role within the regional policies and they should be part of an integral development policy because the benefits of renewable energy may increase regional cohesion, and this may lead to a positive synergy between renewable energy support and local development policies (Del Río and Burguillo, 2009: 1325). The impact of the foreign direct

investments over the economic and social environment may significantly depend on governmental policies applied by the decisional factors, as the flows of foreign direct investments penetrate the economy. The importance of applying some active measures in order to attract foreign direct investments and to modernize the infrastructure has been revealed both by the theory and the economic practice (Trufin, 2010: 15).

The investment in regional and local production of energy from renewable sources may enhance the opportunities for growth and employment in the Member States and their regions. Therefore, national and regional development measures in those areas may be supported, the exchange of best practices in production of energy from renewable sources between local and regional development initiatives may be encouraged, and the use of structural funding in this area may be better promoted (The European Parliament and the Council of the European Union, 2009: 16). Moreover, extending the cooperation between public and private sectors may bring the advantages of a low opportunity cost for learning from the collaborators' experience and for using their resources (Popescu and Corbos, 2011: 34).

The medium and long-term economic development of countries may be based on the development of renewable energy projects, having in mind that the renewable energy sector is highly dynamic and has enormous growth perspectives around the world (Del Río and Burguillo, 2009: 1325). There are some relevant stakeholders in regional renewable energy projects: the local population, the local non-governmental organizations (NGOs), the local government, the generators and investors in renewable energy, and other actors outside the region. On one hand, there are interrelationships and interactions between the stakeholders in regional renewable energy projects, and on the other hand, the renewable energy project has an impact on the stakeholders, but the interests and strategies of actors may also affect the viability of the project itself (Del Río and Burguillo, 2008: 1339).

Sustainable energy development in regional scale needs organizing and implementing institutions, actors, support measures and procedures etc. Municipalities may play an important role by promoting renewable energy because local authorities are fulfilling their functions in the energy sector through a number of tasks (Klevas et al., 2009: 165). The local authorities play an important role in providing funding for the investments in renewable energy, though many companies have to invest themselves, and substantial support may be provided by grants (Von Malmborg, 2007: 1735). The structural funds from the European Union can be used as the main financing source for the implementation of local sustainable development (Klevas et al., 2009: 165).

As Del Río and Burguillo (2008) state, renewable energy generators and investors benefit from the public support for renewable energy projects, though they also have to face investment risks. They can

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"State Reform: Public Administration and Regional Development"
Bucharest, June 21-22, 2011

try to obtain facilities from the local government by convincing it that their project contributes to local sustainability through job creation. Nevertheless, they may have to provide certain compensations to the local community to get the social support for the project. This support might be a key element to ensure its viability, although it also reduces its profitability. These stakeholders can be regarded as an intermediary in the income transfer taking place between electricity consumers, who pay the costs of renewable energy projects' support, and the local community, who receive the financial support although they themselves keep part of such transfer (Del Río and Burguillo, 2008: 1339-1340).

3.2. Community resistance to implementation of renewable energy projects

There are three main obstacles (or sources for community resistance) for social acceptance of renewable energy projects (figure 4): "not in my backyard", environment and opportunism (Rebelgroup, 2011: 7-8). *"Not in my backyard"* refers to a very personal type of resistance motivated by the preservation of one's surroundings, compensation for (economic) loss and a desire to return to the situation before the new development. This type of resistance is motivated by personal feelings rather than a greater goal such as the environment. Some examples of "not in my backyard" resistance are: fear that the project may threat the local tourism, devaluates property values, causes visual pollution or causes a "loss of identity" by changing the rural surroundings. *Environmental resistance* appears from the fear that the project will harm the local environment and residents. Threatening local fauna and flora, pollution of a pristine area (e.g. damming a river, placing electricity lines through forests, etc.), noise and health effects are all examples of environmental reasons for resisting a new renewable energy project (Rebelgroup, 2011: 7-8). However, environment objectives associated with urban regeneration programs are intended to find innovative solutions for reducing the pollution of the environment and improving the living conditions, with the awareness of society's preferences and values (Corbos and Popescu, 2011: 20). *Opportunistic resistance* to a renewable energy project is motivated by extracting the highest possible additional benefit (outside of the original scope of the project) or personal benefit from the project. It is difficult to identify directly the opportunism, because it is often motivated as a "not in my backyard" or environmental issue. Nevertheless, the opportunistic resistance does not wish the project to fail, but to benefit more from it, contrasting with the other two motivations for resistance to the development of a renewable energy project (Rebelgroup, 2011: 7-8).

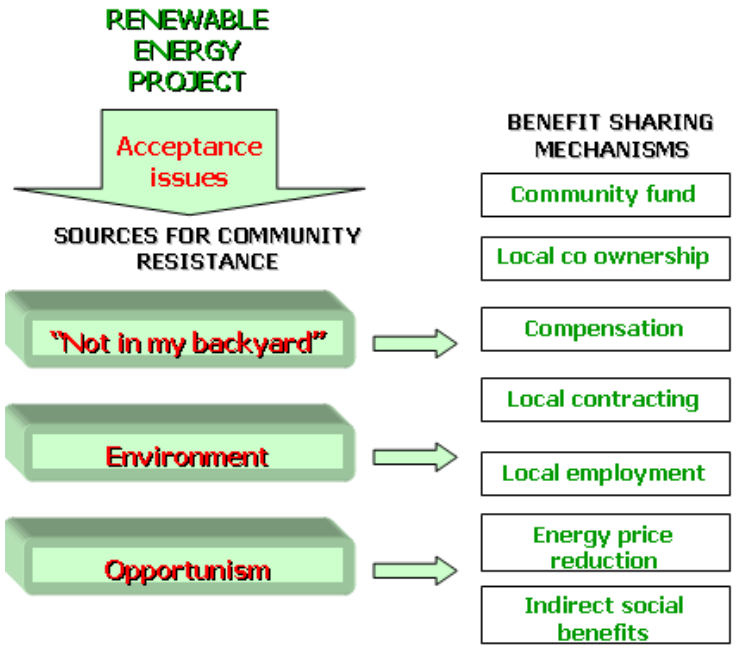

FIGURE 4 - LOCAL SOCIAL RESISTANCE AGAINST RENEWABLE ENERGY PROJECTS

Based on the available literature and case studies Rebelgroup (2011: 10) has identified some financial and non-financial benefit sharing mechanisms which have an impact on acceptance issues of renewable energy projects related to environment, "not in my backyard" and opportunism: (1) community funds; (2) local co-ownership; (3) compensations; (4) local contracting; (5) local employment; (6) energy price reduction; and (7) indirect social benefits.

As regards the community funds mechanism, the local developer provides funds to the community, which may use it for common projects or lowering local taxes. The funds are either paid directly into a community fund or collected indirectly through local taxes by the municipality, and may represent up to 10% of the community budget. The use of the funds is managed either by the community or the municipality. This benefit sharing mechanism particularly offers a positive impact on the mitigation of resistance due to "not in my backyard" effects in the community (Rebelgroup, 2011: 10, 22).

The local co-ownership means that the developer grants or offers to the local community shares in the project and thus creates a high level of local community involvement into the project. Usually, local co-ownership mechanism addresses "not in my backyard" and opportunistic resistance, although it can also be an effective tool for scaling up activities. This is particularly important as many renewable energy projects are still in a development phase (Rebelgroup, 2011: 10, 23).

The compensation mechanism entails that the developer compensates for possible damages such as ecological damages (for instance by creating a new habitat for species endangered by the development). This mechanism may take many different forms including individual monetary

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Bucharest, June 21-22, 2011

compensation for direct material losses, but it is important to avoid any opportunistic behaviour. It can be an effective tool to address both environment and "not in my backyard" acceptance issues of renewable energy projects (Rebelgroup, 2011: 10, 23).

Local employment is prioritized in the construction phase and/or in the operation phase, while local contracting involves local businesses into the development of the renewable energy project. There may be short term effects (during construction), and/or long term effects. The mechanisms of local employment and local contracting reduce resistance due to "not in my backyard" behaviour and to some extent due to opportunistic behaviour (Rebelgroup, 2011: 10, 23).

Energy price reduction for the local community is a direct commitment which gives to the community the opportunity to consume energy at a discount directly offered or to purchase energy at lower prices. Therefore, energy price reduction can address both "not in my backyard" and opportunistic behaviours through a direct financial mechanism (Rebelgroup, 2011: 10, 23).

Indirect social benefits are any other benefits for the local community which are not directly quantifiable (such as prestige, ecotourism, knowledge, etc.). Various projects show the importance of renewable energy plants as touristic attraction or as a visible part of a total sustainability image of a region. Therefore, there is a positive impact on the mitigation of resistance due to "not in my backyard" issue if the renewable energy project is being accepted by the community as a prestigious landmark (Rebelgroup, 2011: 10, 23).

The above mentioned mechanisms may be applied as instruments to develop an "enabling environment" for renewable energy projects at local level. However, getting something "in return" should not become an automatism when a siting decision needs to be made. This can only be the case when a clear and identifiable individual loss is present (i.e. resettlement, lower property values, etc.).

3.3. Local measures for developing renewable energy projects

The local authorities and private companies are increasingly collaborating in the area of environmental policy and management, and public-private partnerships for regional sustainable development have been established in many countries (Von Malmborg, 2007: 1731). Public-private partnerships are usually seen as the most innovative interface between the public and the private sectors, being an essential legal instrument for the delivery of public services. Public-private partnerships are seen as a qualitative jump ahead, in the effort to combine the strong sides of the public sector and the private sector (Hodge and Greve, 2007). The public-private partnerships are voluntarily initiated by public actors as parts of larger programmes and strategies for industrial development and regional

restructuring. The goal of the public actors is to support the private companies in developing their organizational capabilities in environmental management, while simultaneously developing the regional economic and social structures to improve the basis for local and regional business development (Von Malmborg, 2007: 1731).

The efficiency of renewable energy projects in terms of sustainability on the regional level may be evaluated by taking into account different approaches. One of them was recently proposed by Klevas et al. (2009), who integrated some rational methods used in practice by applying the new approach towards the evaluation of sustainability on local level. Their approach is based on the following premises: (1) the environmental pollution and other negative externalities cannot be treated as commodities; (2) the private interests in the competitive environment are the main engine of private business development, but it should be harnessed for the regional sustainable development; (3) the investment project should be integrated in regional development programmes and theoretical background can be developed including strategic impact assessment approach, multi-criteria stated-preferences or revealed preferences approach, sustainable value concept; and (4) the practical implementation can be achieved through the use of the structural funds of the European Union (Klevas et al., 2009: 158).

In order to implement sustainable regional renewable energy projects, some measures may be taken, such as: (1) encouraging the research and innovation activities, through public-private partnerships in the field of renewable energy; (2) encouraging local initiatives, through reducing bureaucracy and creating an efficient administrative framework; and (3) encouraging renewable energy generators and investors to develop more projects so as to increase the competitive advantage of renewable energy sources.

In the short term, the local authorities may take on the following measures: (1) to find investors for renewable energy plants; (2) to help companies, installers, consultants and actors in the renewable energy sector to establish businesses in the region/city; (3) to buy renewable energy; and (4) to educate the population so as to reduce the community resistance.

4. CONCLUSIONS

This study has revealed that local public administration should be involved in regional development of renewable energy, because energy policies need to be adapted to the features of different cities and regions. In addition, the study has disclosed that there is a strong need for a renewable energy partnership between public authorities, business community and civil society in order to achieve the

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regional development of renewable energy. Sustainable regional development can only be attained if both local public authorities and private companies work together, and if the public administration acts as a facilitator for renewable energy projects' implementation and development. This way the future sustainable development will have the power of the new wave of renewable energy.

Public administration – private companies partnership for regional development of renewable energy could be helpful in order to better address the problems encountered in supporting renewable energy projects by the local authorities. The results of this study may be used for future research in the area of implementing renewable energy projects at regional level through partnerships between the public administration and private companies.

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